

**THE IMPACTS OF ELECTRONIC BANKING ON CUSTOMER
SATISFACTION IN TANZANIA BANKING INDUSTRY: A CASE STUDY OF
NMB BANK**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTERS OF PROJECT
MANAGEMENT OF THE OPEN UNIVERSITY OF TANZANIA**

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled: **“The Impacts Of Electronic Banking On Customer Satisfaction In Tanzania Banking Industry: The Case of NMB Bank”**, in partial fulfilment of the requirements for the degree of Master of Project Management of the Open University of Tanzania.

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DECLARATION

I, **Doreen Akad Mchomba**, do hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or other degree award.

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Signature

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Date

DEDICATION

This research project is dedicated to my family for their constant support and encouragement throughout my studies. I cannot forget my parents for their wisdom and inspiration which has been my pillar in search for knowledge.

ACKNOWLEDGEMENT

I thank the Almighty God for seeing me through the entire research period.

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ABSTRACT

This study presents the impacts of electronic banking on customer satisfaction in Tanzania banking industry; the case study of NMB bank. The study investigated the impacts of electronic banking on customers' satisfaction in Tanzania banking industry, the effects of e-banking services on customer satisfaction, the benefits associated with electronic banking usage as well as the challenges associated with electronic banking usage. The accessibility of E-banking to bank customers in Tanzania, the convenience to ordinary bank customers in Tanzania and whether e-banking is secure enough for E-banking customers as well as the risks encountered by customers when using e-banking in Tanzania. The study involved (52.8%) males and (47.2%) female. data collection methods were questionnaires. The study revealed different impacts affecting the bank customers using e-banking services and products, such impacts were accessibility, time factor, availability, user friendly and security. It was also revealed that, level of education and income level has greater impacts on customer satisfactions. The results indicated that 63.6% of the respondents reveal that they actually spend less time using E-banking. There were different challenges of e-banking revealed such as network failure, limited withdraw amount, no instant help in case of transaction failure, new enough cash on machines especially during the weekends. It was concluded that customers prefer ATM among the e-banking products and services because of its accessibility, time saving and availability. It was recommended that information on e-banking services should be given to customers in order to encourage and attract more bank customers to using the services and products.

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LIST OF ABBREVIATIONS

ATM	Automated Teller Machine
ATT	Attitude
AVR	Automated Voice Response
ICT	Information and Communication Technology
IT	Information Technology
NMB	National Microfinance Banks
PIN	Personal Identification Number
POS	Point of Sale
QFD	Quality Function Deployment
SCS	Sharjah Co-operative Society
SMS	Short Message Service
SWIFT	Society for Worldwide Interbank Financial Telecommunications
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
WAN	Wide Area Network

CHAPTER ONE

INTRODUCTION AND BACKGROUND INFORMATION

1.1 Introduction

Chapter one presents the background information of the study, statement of the problem, research objectives and research questions. It further highlights the significance of the study, clarifies the scope of the study as well as organization of the study.

1.2 Background of the Study

Technology is making a tremendous impact upon banks in general and the financial services sector is no exception. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamentals importance and concerns to all banks and indeed a prerequisite for local and global competitiveness in banking industry. As a result of this technological improvement business environment in financial sector is extremely dynamic and experience rapid changes and demands banks to serve their customer through the use of internet.

The 21st Century, shaped by the technological revolution, is the age of globalization. The Internet massively impacts all aspects of business. In the 21st century, electronic business is no longer an option for businesses; it is a necessity (George, 2011). Recently, electronic banking has been adopted in various commercial activities (Mambi, 2010), advancing services such as sell and purchase of items through the use of internet systems. Despite the risks associated with this technology, market

economy, and the need to make the world a one village has necessitated commercial and financial institutions to adopt electronic banking to link banking activities or affairs more easily than it was in the past (Ballali, 2011). This is to say with electronic banking it is even easier for a holding bank to control its subsidiary bank allocated at a distant as a result of technological advancement (Ballali, 2011).

The enormous increase of the internet is changing the way businesses interact with consumers as most businesses are now conducted using the internet. It is this introduction of e-commerce as a means of payment that has urged banks to take a leap from the traditional banking services, offering a service strongly through the medium of internet, which has come to be known as internet banking or e-banking. This has given banks the chances to inspire clients which urge them to continue banking with them.

Today, it is hard to see a bank in the nation that does not offer one type of electronic banking service or the other, even banks in the most remote parts of the country. Developed and developing areas of the world are now using internet banking services as a competitive strategy (Cheruiyot, 2013). The competitiveness in the banking industries have called for the need to improving on board the electronic platform into industries around the world. Banks chose to implement, investigate, analyze and endeavor to present internet banking service to decrease holding up time, lapses, costs, and enhance customer service support. Their internet banking services permit clients to access and inquire about their own particular accounts and perform basic transactions by means of the internet from their PCs and smart phones at their workplace and home whenever the timing is ideal time.

1.3 Statement of the Problem

Today's bank customers seek more than price bargains. They want useful and dependable and reliable technologies. Many banks in Tanzania have exponentially embraced the use of information and communication technologies in their service provision causing a huge competition in the banking industries.

In response, many financial institutions are directing their strategies towards increasing customer satisfaction and loyalty through improved service quality as it gives competitive advantage for banks by reducing operational cost and providing best satisfaction of customer needs. It is normal that banks that don't offer electronic banking services may lose their clients to their competitors (Kwarteng, 2015). They are providing internet banking to their customers to increase customers' satisfaction in banking service (Shittu, 2010).

Customers in Tanzania are late adopters of the Internet and its applications with regards to internet banking. However, issues like machine out of order, lack of sufficient alternative system which substitutes ATM service when temporary problem happen in the machine, and innovation, resistance to changes in technology among customers and service providers as result of fear of risk creates doubts in the minds of customers thereby affecting their level of satisfaction. Because of these existing problems, this study intends to fill in the gaps by examining the effects of e-banking on customers' satisfactions in the major banks of Tanzania.

1.4 Research Objectives

The study was guided by the following general and specific objectives.

1.4.1 General Research Objective

The general objective of this study was to analyze the impacts of electronic banking on customers' satisfaction in Tanzania banking industry.

1.4.2 Specific Research Objectives

- (i) To investigate the impacts of e-banking services on customer satisfaction.
- (ii) To find out the benefits associated with electronic banking usage.
- (iii) To find out the challenges associated with electronic banking usage.

1.5 Research Questions

- (i) Is there any significant relationship between e-banking services on customer satisfaction?
- (ii) What are the benefits associated with electronic banking services?
- (iii) What are the challenges associated with electronic banking services?

1.6 Significance of the Study

The finding of the study will be of great importance to managers of commercial banks in Tanzania as they will understand the effect of electronic banking on profitability of their banks as well as the complaints of the customers. This will go a long way to help the bank achieve its stated objectives, and in the long run increase shareholder's wealth.

Additionally, the findings will help stakeholders in the banking industry to identify challenges faced by their customers and formulate strategies of overcoming them. The study will be of great importance to future scholars and academicians as it will form

basis for future research as well as providing literature for future studies on electronic banking.

1.7 Scope of the Study

This study intended to investigate the effects of electronic banking on customer satisfaction in Tanzania banking industries by looking at the customer's perception on e-banking, customers' awareness on e-banking, the accessibility of e-banking to customers and the effects of e-banking on customers at Ubungo District in Dar es Salaam region. Dar es Salaam region was selected because was one of the most populated city in Tanzania and one of the largest cities in eastern Africa by population. Furthermore, Dar es Salaam was regionally important economic center and it was one of the fastest growing city in the world. Until 2012, the region had a population of 4,364,541 as of the official 2012 census. Therefore the demand of internet banking services was high due to traffic germs hence meeting the study objectives easily.

1.8 Organization of the Study

The study is divided into five chapters. Chapter One is concern with the background to the study, statement of the problem, research question, objectives of the study, significance of the study, scope of the study, limitation of the study and lastly how the whole study is organized. Chapter Two dealt with the literature review. This chapter examines the views of other theorists and authors about the issues under discussion as well as review of previous studies on the impacts of electronic banking on customer satisfactions. Chapter Three outlines the research methods the researcher employs in

carrying out the study. The chapter also deals with the study area, sample size and the sample selection as well as methods of data collection, management among others. Chapter Four presented the analysis and presentation of data in this study. Chapter Five being the final chapter of this study presented the summary, conclusion and the necessary recommendations of the study which emanated from the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter introduces concepts such as electronic banking, customer, internet banking and customer satisfaction. Additionally, the chapter highlights the relevant theory guiding this study. Furthermore, the empirical literature review is presented in this chapter. The research gap for this study will also be presented in this chapter. In the end the conceptual framework guiding this study will be presented.

This chapter highlighted the conceptual definitions and the relevant theories guiding the study. In this area, other scholars have proposed various theories in attempt to explaining the concepts or variables. Also similar researches have been done serving as empirical studies. It is, therefore, important that the researcher reviews some of these theories and earlier works on the subject matter. Although most of these works had been written in different setting and context, their contribution to the success of this study is very meaningful. This chapter broadly looked at two major sections. Firstly being the theoretical review, this primarily concerned with the various theories explaining electronic banking and how it satisfies the customer. The second section concentrated on empirical works which has been conducted by other researchers.

2.2 Conceptual Definition

2.2.1 Customer

A customer is a person who maintains an account with the bank. One view of this question is that a person does not become a bank customer unless and until he opens

an account with a bank (Adebayo, 2013). Based on this study, customer is defined as any person who seeks for banking services or products from the commercial banks.

2.2.2 Customer Satisfaction

Customer satisfaction is defined as the number of customers, or percentage of total customers, whose reported experience with a firm, its products or its services (ratings) exceeds specified satisfaction goals (Farris et al., 2010). Customer satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations (Musiime and Biyaki, 2010). Based on this study, customer satisfaction will be defined as the measure of how a product or service given to a customer meets the expectations of that particular customer.

2.2.3 Electronic Banking

Timothy (2012) electronic banking refers to the use of the Internet as a remote delivery channel for providing services, such as opening a deposit account, transferring funds among different accounts and electronic bill presentment and payment. This can be offered in two main ways. First, an existing bank with physical offices can establish a Website and offer these services to its customers in addition to its traditional delivery channels. Second, is to establish a virtual bank, where the computer server is housed in an office that serves as the legal address of such a bank. Virtual banks offer their customers the ability to make deposits and withdraw funds via ATMs (Automated Teller Machines) or other remote delivery channels owned by other institutions, for which a service fee is incurred. Based on this study, electronic

banking can be defined as the means of transferring cash from an electronic terminal device or medium to another.

2.2.4 Internet Banking

Arunachalam and Sivasubramanian (2007) content that Internet banking is where customer can access his or her bank account via the internet using PC or mobile phone and web-browser. Ongkasuwan and Tantichattanont (2002) defined Internet banking service as banking service that allows customers to access and perform financial transactions on their bank accounts from their computers with Internet connection. Based on this study, internet banking is defined as an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. According to this study, it is an online banking that gives a 24/7 access to customers.

2.2.5 Automated Teller Machines (ATMs)

According to Loverock (2011), Automated Teller Machines (ATM) reduces the workload of bank`s staff – ATMs reduce the work pressure on bank`s staff and avoid queues in bank premises. The customer can obtain exact amount. There is no human error as far as ATMs are concerned (Pandian et al, 2011).

Using ATM, a customer can withdraw cash up to a certain limit during any time of the day or night (Akrani, 2011). Based on this study, ATM is an electronic service that provides a 24 hours service to customers.

2.2.6 Telephone Banking

Telephone Banking (Telebanking) can be considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices where the bank customers can perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit, which is connected to an automated system of the bank by utilizing Automated Voice Response (AVR) technology (Balachandher *et al.*, 2001). The good example of this form is the mobile money services like M-pesa, Tigopesa, EzyPesa, Halo Pesa and Airtel Money. Based on this study, telephone banking can be defined as an e-banking transaction that can be performed by any person, day and night using his or her mobile phone.

2.2.7 Branch Networking

Networking of branches can be depicted as the computerization and between associating of geographically diverse stand-alone bank branches, into a framework of Wide Area Network (WAN) for making and sharing of solidified client data (Abor, 2005). It provides quick inter- branch transactions and hence the effect of time and distance are eliminated. Regardless of where a customer opened his or her accounts, he or she can access it anywhere. Based on this study, branch networking is a money transaction service whereby a customer can have access to his or her bank account any in the country or even outside countries provided that these banks are connected together in a WAN. The good example of this form in Tanzania is the UMOJA SWITCH and the VISA CARDS.

2.2.8 Mobile Banking

Literally this is banking conducted through the use of a mobile phone. A mobile banking transaction can be an account inquiry that does not involve a payment such as checking account balance, checking credit limit, looking up transaction history or that involve payment transaction such as a mobile payment, a mobile purchase, a mobile money transfer(Karthikeyan et al., 2017).

This system uses short text messaging system to inform customers of their account (Chovanova, 2006). Based on this study, mobile banking is whereby customers access their bank accounts using their mobile phones. A good example of this form is the NMB Mobile service.

2.3.1 Benefits of E-Banking

The benefits of electronic banking cannot be over emphasized. This is to say that it provides a lot of benefits both to the customer and the bank itself. To begin with a foremost benefit e-banking service is competitive branding and as well as better appreciation to the market demands. As indicated by perspectives communicated by Jen and Michael (2006), electronic-banking has made common open doors for banks and businesses around the world, and that is clear in the way they sort out financial transaction.

Through electronic banking, banks have the capacity to draw in versatile clients which give to a great degree huge profit by giving portable money related services. Wind (2001), demonstrated that numerous banks are roused to actualize E-banking by components identifying with augmenting their profit through expansion market scope.

The increase use in credit card is attributable to electronic banking. Customers are able to shop worldwide without the need of carrying paper money.

2.3.2 Challenges of E-banking

Electronic banking is the wave of future; it provides enormous benefits to consumers in terms of easy and costs transactions but it also poses new challenges for country authorities in regulation and supervisions of the financial system and designing and implementing macroeconomic policy. One of the main trending challenges in e-banking is money frauds. Reports show frauds and forgeries in some of the Tanzania commercial banks and more on telephone banking are increasing daily. These issues basically defeat the key ingredients of information technology, which includes confidentiality, integrity and availability. Chronic unemployment among graduates and the widening gap between the few rich and the many poor is another challenge. One key issue here borders on how to handle the rising level of frauds and forgery prevalent in the entire banking system; and how to make Internet banking fit well in the banking structure of a country so notoriously identifiable with criminals use Internet access.

2.4 Theoretical Literature Review

The foundation of this study is based on the theories of Planned Behavior, Technology Acceptance Model and Disconfirmation theory.

2.4.1 Theory of Planned Behavior

Theory of planned behavior (TPB) has been successfully used to predict users' acceptance of IT (Amjad and Wood, 2009). It links the relationships between attitudes

and behavior of an individual. The concept was proposed by Ajzen,(1985) to improve on the predictive power of the theory of reasoned action by including perceived behavioral control (Koger and Winter, 2010). It is one of the most predictive persuasion theories. It has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising, public relations, advertising campaigns and healthcare.

The theory states that attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors (Sniehotta, 2009). This theory helps to understand how the behavior of people can change. The TPB is a theory which predicts deliberate behavior, because behavior can be deliberative and planned. TPB is the successor of the similar Theory of Reasoned Action of Ajzen and Fishbein (Koger and Winter, 2010). The succession was the result of the discovery that behavior appeared not to be 100% voluntary and under control, which resulted in the addition of perceived behavioral control. With this addition the theory was called the Theory of Planned Behavior. Attitude (ATT) is the general feeling of people about the desirability or undesirability of a specific behavior. Subjective norm (SN) expresses the perceived organizational or social pressure of a person who intends to perform a particular behavior. Perceived behavioral control (PBC) reflects a person's perception of the ease or difficulty of implementing a particular behavior.

The ability of TPB in providing a useful theoretical framework for understanding and predicting the acceptance of new information systems is demonstrated (Ajzen, 2002). Armitage and Conner (2001) analyzed previous studies using the TBP in a meta-

analysis study. A review of existing evidence suggests that the residual impact of past behavior is attenuated when measures of intention and behavior are compatible and vanishes when intentions are strong and well formed, expectations are realistic, and specific plans for intention implementation have been developed. The major conclusion was support for the efficacy of the TPB and the suggestion that more work on new variables is needed to increase the predictability of the model.

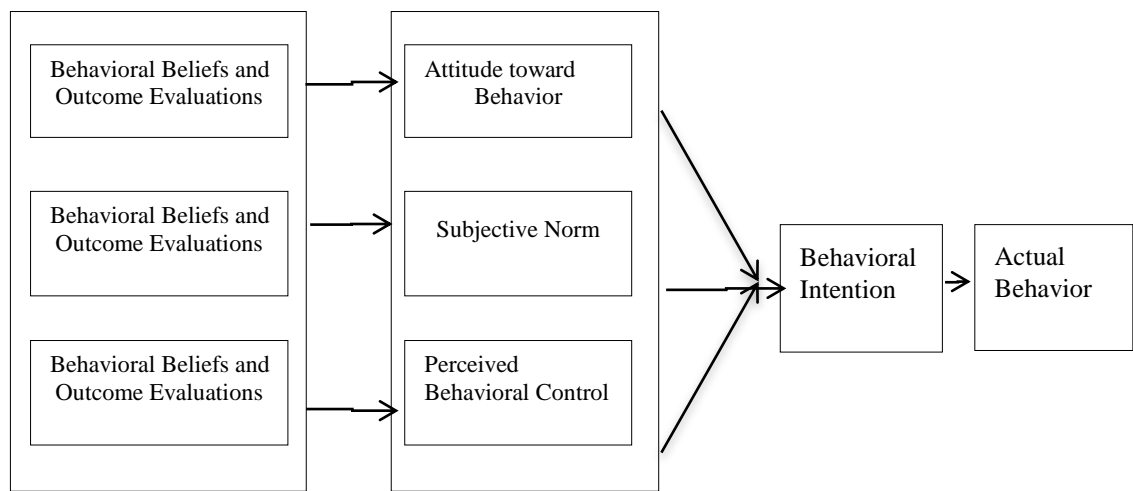


Figure 2.1 : Theory of Planned Behavior Model

2.4.2 The Technology Acceptance Model (TAM)

The Technology Acceptance Model proposed by (Bagozzi, Davis and Warshaw, 1992) appears to be the most widely used innovation adoption model. This model has been used in a variety of studies to explore the factors affecting individual's use of new technology. The sequential relationship of belief–attitude–intention– behavior in TAM enables us to predict the use of new technologies by users. In fact, TAM is an adaptation of Theory of Reasoned Action (TRA) in regard to information systems which notes that perceived usefulness and perceived ease of use determine an individual's attitudes towards their intention to use an innovation with the intention

serving as a mediator to the actual use of the system. Perceived usefulness is also considered to be affected directly by perceived ease of use.

In the case of system adoption, according to (Hanafizadeh, et al., 2014), used the TAM model. This theory asserts that perceived usefulness and ease of use are fundamental determinants of system adoption and usage (Bankole, et al., 2011). Many electro-banking adoption studies extend or supplement the original TAM by including additional constructs, such as relative advantage and personal innovativeness (Chitungo and Munongo, 2013), perceived risk, perceived cost of use, compatibility with lifestyle (Hanafizadeh, et al., 2014), and perceived security (Hsu, Wang and Lin, 2011). In fact, TAM provides the provision to add external variables as the determinants of perceived usefulness and perceived ease of use (Davis, 1989).

Additionally, TAM assumes that potential consumers are free to act and choose without limitation. In fact, consumers may come up with some constraints in practice that may prevent them to act freely such as the rationalization of traditional banking channels which is why many of them tend to adopt mobile banking over the past decade (Hanafizadeh, et al., 2014). Additionally, Yousafzai, et al., (2010), indicated that TAM is superior to the other models and highlighted the importance of it in understanding online banking behavior.

Jongu (2014) agree that the e-banking services provides convenience and promptness to customers along with cost savings, banks are also interested in expanding their market through e-banking services. Kleijnen et al., (2004) found that the advancement

of mobile technologies has provided an opportunity for financial providers in introducing new financial innovations.

2.4.3 Disconfirmation Theory

Disconfirmation theory argues that ‘satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Szymanski and Henard (2001) found in the meta-analysis that the disconfirmation paradigm is the best predictor of customer satisfaction (Gardachew, 2010). Fang, Tian, and Tice (2010) cite Oliver’s updated definition on the disconfirmation theory, which states Satisfaction is the guest’s fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment.

Karjaluoto, Mattila and Pento (2012) observes that amongst the most popular satisfaction theories is the disconfirmation theory, which argues that satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Basically, satisfaction is the result of direct experiences with products or services, and it occurs by comparing perceptions against a standard. Research also indicates that how the service was delivered is more important than the outcome of the service process, and dissatisfaction towards the service often simply occurs when guest’s perceptions do not meet their expectations. Commercial banks must at all times ensure that they have satisfied their customers if they are to expect any positive feedback from them. Customers may also be a major source of new business through referrals.

2.5 Empirical Literature Review

Several studies have been done to examine the effects of e-banking on customer satisfaction. Some of these studies including a work by Ishengoma (2011) conducted a study on the analysis of mobile banking for financial inclusion in Tanzania. The study employed a TAM to explain the concept of customer perception of usefulness (benefits of electronic banking) and customer perception of ease of use. The findings show that the perceived risk of use affected the usage behavior of the customers; however the customer perception of benefits pushed the customers to use the m-banking services. The study did not take into account the totality of electronic banking products, which in turn leaves the question of electronic banking impacts to customers of other alternatives (ATM, Internet banking) unanswered.

Amaoko (2012) of Ghana, in his research found that, ICT has contributed positively to the provision of banking services and growth of the Ghanaian banking industry. It was also reported that, e-banking is not yet developed in Ghana. The study recommended that banks should develop user friendly systems and applications for general population. Government and banks should play a key in enhancing ICT infrastructure, put in place incentives like tax reduction, and make PC available and affordable for every Ghanaian. Financial institutions should offer programs to reassure customer's safety with regards to ICT through sensitization. Lastly the banking institutions should also come out with more electronic products and services to reduce the turnaround time of customers, such products will give them the opportunity to sit at the comfort of their homes, workplaces and transact business with the banks.

Additionally, Bank of Tanzania (2013) pointed out that e-banking is revolution by changing the way Tanzanians are spending what they earn by providing them with secure banking. It is also profitable for the companies, known as microfinance institutions, which run the banking systems. The most popular vehicle through which customers can utilize banking services electronically is via mobile phone. The technology allows customers to check and manage their accounts, pay utility and service bills and transfer money between accounts either their own or someone else all on their phone.

The value proposition however, is a significant increase in the intangible item "customer satisfaction". The increase translates into improved customer loyalty that in result in higher customer retention and growing organization value. Internet banking is a lower-cost delivery channel and a way to increase sales. Today, internet banking services has become one of the most important factors in the business economy of Tanzanians.

As analyzed by Santouridis *et al.*, (2009) empirically investigate the internet banking in Greece by examining the customer satisfaction and the quality of electronic banking services. The researchers have used SERVQUAL model to measure the electronic banking services. From the results, they observed that the dimensions of assurance, responsiveness and reliability have a significant and positive impact on customer satisfaction level. In their study, reliability is found to have the most strong and highest impact on customer satisfaction and recommended that the dimensions which do not have association with level of customer satisfaction needs to be improved by the banking sector.

Nupur (2010) performed an analysis on the electronic banking and the satisfaction level of customers in Bangladesh. The researcher selected a sample size of 250 respondents to collect the data. The researcher used SERVQUAL model to measure the association among the level of customer satisfaction and electronic banking. The observation showed that a relationship exists between the electronic banking services and customer satisfaction level. The main dimensions examined are reliability, empathy, responsiveness and assurance which results in adequately satisfying the customers, whereas, the tangibles dimension does not have any link to customer satisfaction.

Sadeghi and Hanzaee (2010) have investigated the factors of customer satisfaction in the usage of internet banking services in Iran. The study has been conducted to determine the factors which examine the customer satisfaction with the services of electronic banking. The researcher reveals that reliability, design of the website, image, accuracy and impression of the management of bank are found to have the most significant impact on the satisfaction level of customers. The variables of privacy and security also have an impact on customer satisfaction, but its impact is very least.

Ahmad and Al-zu'bi (2011) performed a research related to how the functionality of electronic banking is related to the consequences of customer satisfaction. The research has been done by considering banks of Jordan. Through the random sampling technique, the sample size chosen by the researchers is 185. It has been found that the variables which include privacy, accessibility, design, convenience, content and security has been emerged to have a significant influence on the customer satisfaction.

Ankit (2011) determined the factors of electronic banking which have an impact on customer satisfaction in India. The sample size of 250 respondents has been selected for the study, and the data has been collected through questionnaires. The results of the study showed that the banking needs which include convenience, privacy, risk, and problem resolution are found to be the most important determinants which have a positive impact on customer satisfaction, whereas, the availability of features and customer continuation are found to have a very slight impact on customer satisfaction..

Shamsuddoha and Alamgir (2010) conducted a study on Loyalty and Satisfaction Construct in Retail Banking in India. This study investigated customer satisfaction as the most important factor behind loyalty in retail banking. Various study showed that satisfaction plays an important role to establish loyal customer base. Their study points out that satisfaction and loyalty relationship was critical for retail banks.

Ali and Akter (2010) argued that a transitional period in the banking sector of Bangladesh has been passing through since shifting from the traditional banking system to the online banking system. These comments indicate that gradually electronic banking is gaining its importance in Bangladesh. Customers' liking is necessary for the banking sector to elevate profitability, business expansion and accomplishment. At the same time the banking process is becoming faster and easier. In order to survive in the competitive field of the banking sector commercial banks are looking for better service opportunities to provide their customer. The paper has been undertaken mainly to find out whether e-banking can satisfy the customers or not.

Furthermore, Sonja (2010) did research on the effects of computerization on saving and credit cooperatives in Uganda and found out that technology is likely to increase the efficiency outreach and sustainability of microfinance institutions.

Table 2.1: Summary of Studies Related to Customer Satisfaction and Services

S/N	Author (s)	Aim of the study	Variables examined	Methodology used	Major Findings
1.	Sonja (2010)	Examined the effects of computerization on saving and credit cooperatives in Uganda	Time factor, Availability, Accessibility,	Multiple regression and random sampling	It was found that technology is likely to increase the efficiency outreach and sustainability of microfinance institutions
2	Ishengoma (2011)	Analyzed the mobile banking for financial inclusion in Tanzania	User friendliness, ease of use, Accessible.	Random sampling and regression analysis	It was found that mobile banking meets the needs of customers for money transactions
3	Nupur (2010)	Analysis on the electronic banking and the satisfaction level of customers in Bangladesh.	Reliability, responsiveness, empathy, assurance	Regression analysis and random sampling	The researcher observed that there is a relation between customer satisfaction in e-banking and reliability, responsiveness, assurance, empathy
4	Sadeghi and Hamzaee (2010)	Investigating factors of customer satisfaction in the usage of internet banking services in Iran.	Reliability, images, accuracy	fixed effect model and random effect model	Specific determinants of bank profitability were analyzed and found more effective in large banks
5	Ahmad and Al-Zu'bi (2011)	Understanding Customer Satisfaction of Internet Banking	Service quality, web design and content, security and privacy, convenience and speed.	purposive sampling technique	The results showed that web design and content, convenience and speed are the top three factors that influence customer satisfaction toward Internet Banking.
6	Ankit (2011)	Factors affecting electronic banking and its impacts on customer satisfaction.	Convenience, privacy, risk, problem resolution.	Descriptive analysis and random sampling	The results were as follows, the banking needs like privacy, convenience has a positive impact.
7	Ali and Akter (2010)	Impacts of customer satisfaction towards e-banking in Bangladesh	Value congruence, effective commitment	Convenient sampling	The study established the relationship among the value congruence, affective commitment and customer satisfaction towards the incipient online banking in Bangladesh.
8	Shamsud doha and Alamgir (2010)	Investigation of Loyalty and Satisfaction Construct in Retail Banking in India.	Loyalty	Correlation analysis and random sampling	The study showed that customer satisfaction as the most important factor behind loyalty in retail banking.
9	Santouri dis (2009)	To investigate crucial factors that lead to customer loyalty in the mobile telephony sector in Greece	Reliability, responsiveness, accuracy.	Correlation analysis	Customer service, pricing structure and billing system are the service quality dimensions that have the more significant positive influence on customer satisfaction.
10	Amaoko (2012)	The effects of ICT on e-banking in Ghana.	Time saving, user friendly, Responsiveness	descriptive statistics	Service is a combination of business process and technology that seeks to understand a company's customers from the perspective of who they are, what they do, and what they are like.

2.5.1 E-banking Variables

2.5.1.1 Security

Assurance about security relates to the extent to which the web site guarantees the safety of customers' financial and personal information, an area which has witnessed a proliferation of research interest (Kimery and McCord, 2002). Security can be assured by providing a privacy statement and information about the security of the shopping mechanisms and by displaying the logos of trusted third parties. For example, displaying trusted third party logo guarantees a certain level of security protection and has been shown to significantly influence how consumers regard the trustworthiness of e vendors (Jiang *et al.*, 2008).

2.5.1.2 Availability

Electronic banking provides higher degree of convenience that enables customers to access electronically at all times and places. Apart from that, the ease of access of computers is perceived as a measure of relative advantage (Polatoglu and Ekin, 2001). Gerrard and Cunningham (2003) revealed that there are some service quality determinants that are predominantly satisfiers and others that are predominantly dissatisfies with the main sources of satisfaction being attentiveness, responsiveness, care and friendliness. The main sources of dissatisfaction are integrity, reliability, responsiveness, availability and functionality.

According to Ainscough and Luckett (1996), the provision of customer interactivity is an important criterion that attracts users in the delivery of e-banking. Gerrard and Cunningham (2003) also identify other factors of paramount importance in ensuring the success of e-banking, i.e. the ability of an innovation to meet users' needs using

different feature availability on the web site. For instance, the provision of interactive loan calculators, exchange rate converters, and mortgage calculators on the web sites draw the attention of both users and non-users into the bank's web site.

2.5.1.3 Accessibility

Accessibility is defined as the ability of users to access information and services from the web, this depends on many factors. They include: the content format; the user's hardware, software and settings; internet connections; the environmental conditions and the user's abilities and disabilities (Godwin-Jones 2001; Hackett and Parmanto, 2009).

The term web accessibility generally relates to the implementation of website content in such a way as to maximize the ability of users with disabilities to access it. For example, providing a text equivalent for image content of a web page, allows users with some visual disabilities access to the information via a screen reader. The techniques and approaches that create more accessible web pages for people with disabilities also address many other access issues such as download speed and discoverability (Hackett et al., 2004; Hackett and Parmanto, 2009).

Yang and Jun (2002) redefined the traditional service quality dimensions in the context of online services, and suggested an instrument consisting of seven online service dimensions (reliability, access, ease of use, personalization, security, credibility, and responsiveness). Joseph et al., (1999) considered banking service quality with respect to technology use, such as ATMs, telephone, and the internet and identified six dimensions. They were convenience/accuracy; feedback/complaint

management; efficiency; queue management; accessibility; and customization. Therefore, accessibility has positive effect on customer satisfaction.

2.5.1.4 Ease of Use and User friendliness

Easy to use and user friendliness: Ease of use is an important determinant for the customer preferring the internet banking (Beer, 2006). In a study conducted by Karjaluoto et al., (2002) reported that ease of use of innovative product or service as one of the three important characteristics for adoption from the customer's perspective. The user friendliness of domain names as well as the navigation tools available in the web-sites is an important determinant for ease of use.

2.5.1.5 Time factor

Liu and Arnett in their study identified time factor as one of the prime factor that in e-banking service quality feature for the customers. Saving time is an importance factor which influences the customers prefers to use e-banking (Beer, 2006). Banks can make the information of products and services available on their site, which is, an advantageous proposition.

2.6 Research Gap Identified

Although, there are abundant studies on customer satisfaction and e-banking worldwide, the focus of those studies was both on customer satisfaction and on service quality offered by the banks as well as on the organizational. For instance of these studies are Sonja (2010) conducted a study on the immacts of computerization in banking industry in Uganda, Ishengoma (2011) in Tanzania, Nupur (2010) of

Bangladesh, Sadeghi and Hamzaee (2010) of Iran, Ahmad and Al-Zu'bi (2011), Ankit (2011), Ali and Akter (2010), Shamsuddoha and Alamgir (2010) investigated customer loyalty and customer satisfaction in India. Santouridis (2009) of Greece investigated factors leading to customer loyalty and Amaoko (2012) of Ghana conducted a study on the effects of ICT on e-banking. However, this study will mainly address the effects of electronic banking on customer satisfaction in Tanzania banking industries.

2.7 Conceptual Framework

In service provision, there are some factors, which are considered by customers as a benchmark for appreciating a service being offered (Ramora and Sundaram, 2012). With regard to ATM, Ramora and Sundaram (2012) mentioned a list of factors considered by customers as important for their service satisfaction. Such factors include tangibility, reliability, convenience, assurance, accuracy, safety, ease of use, and responsiveness.

They posited that, each of these factors is very important for customer satisfaction for the service being provided. The service should be reliable, in that the service has to be available every time the customer needs it. The service should be user friendly, meaning that a customer will be loyal to the service he/she is able to use with ease. Customers are satisfied when the service they are receiving is executed accurately, and they are always sensitive to their safety when receiving any service of their choice.

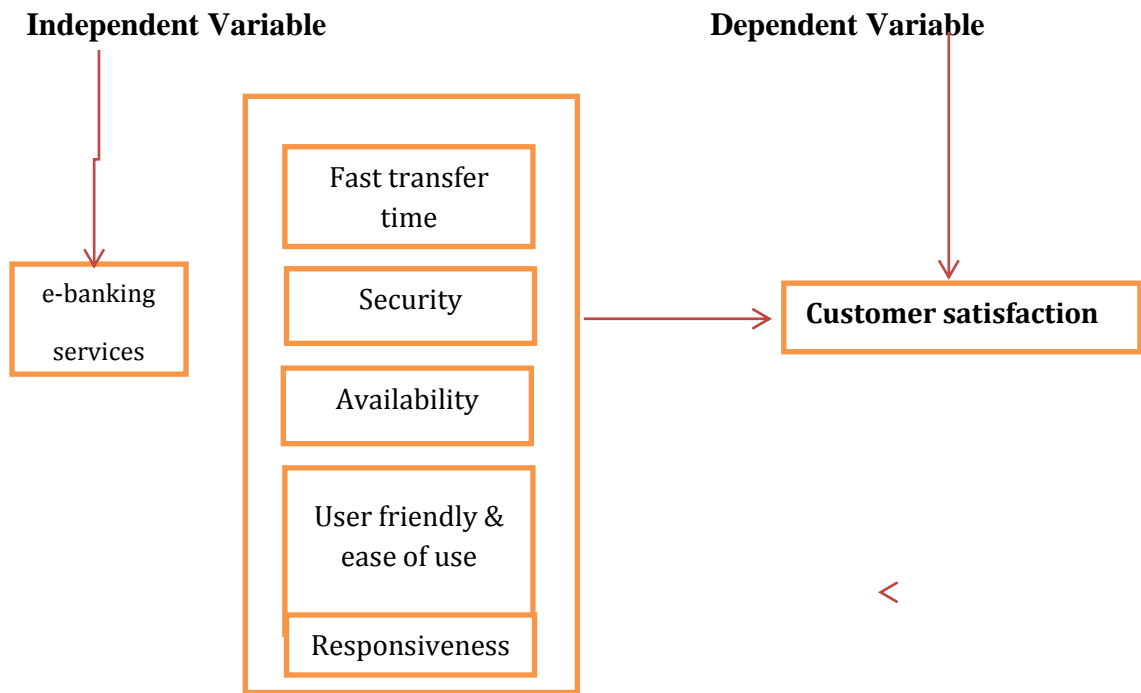


Figure 2.2: Service-Customer Satisfaction Relationship in e-banking

Source: Researcher (2017)

2.8 Proposed Hypotheses

The primary objective of this study was to evaluate the impacts of e-banking services on customers' satisfaction in Tanzania banking industry. A search light was beamed on the banking sector to help to illuminate banking industry with regards to rendering e-banking services to their customers. In attempting to establish a relationship between electronic banking systems and customers' satisfaction, the following research set of hypothesis were framed;

H0: There is no significant relationship between electronic banking and customers' satisfaction.

H1: There is a significant relationship between electronic banking and customers' satisfaction.

2.9 Chapter Overview

This chapter highlighted the definitions of the key concepts, followed by the details regarding Theory of Reasoned Action and TAM. Additionally, this chapter also presented the works of previous related literatures on customer satisfaction and e-banking. It also presented the conceptual framework before addressing the proposed hypotheses that guiding this study.

Chapter Three outlines the research methods the researcher employed in carrying out the study. The chapter also dealt with the study area, sample size and the sample selection as well as methods used to collect the data. This chapter also highlights the data analysis methods used in study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presented the methodology the researcher adopted in carrying out the study. According to Sharma; “methodology refers to as system of principles and methods of organizing and constructing theoretical and practical activity (Sharma, 1992). Similarly Collins Dictionary (2010) has defined methodology as “the techniques and strategies employed within a discipline to manipulate data and acquire knowledge”. It described the research design, area of study, the targeted population sample as well as sampling methods and sample size. Furthermore, the chapter covered the types of data and data collection procedures and goes on presenting the data management strategy, data analysis and interpretation.

3.2 Research Philosophy

This study adopted a descriptive survey design. It was used as it had merits such a researcher having no control over the variables and only reported what was happening. It was found appropriate because it involved collecting data in order to answer relatable questions concerning the current status of subjects under study. The research design provides facts and suggestions on major connections between the variables. The primary purpose of this study was to determine the effect of e-banking on customer satisfaction in Tanzania banking Industry.

3.3 Research Design

A research design is a plan or strategy used to get the expected study results (Kothari, 2004). A research design includes an outline of what the investigator will do from

untying the hypothesis, or research questions, and their operational implications to the final analysis of data (Polit and Beck, 2006). Research design is categorized into different types depending on the nature of the study, which includes case study design, survey design and experimental design. The type of study is an exploratory study. Exploratory research design refers to social research which explores a certain phenomenon with the primary aim of understanding the phenomenon or situation (Bless and Hingson-Smith, 2010).

A quantitative research design was selected for this study because it was a formal objective, systemic process in which numerical data are utilized to obtain information (Burns and Grove, 2005). One of the characteristic of quantitative research made it suitable for the study was that the researcher used structured interview instrument (open ended questionnaire) to collect the data on each participant. However, the study made use of qualitative approaches in the data analysis as well.

3.3.1 Survey Population

Population is a group of individual who have one or more characteristics in common (Kothari, 2000). The population in this study involved all NMB commercial Bank customers. The main focus being on NMB Bank Mlimani City Branch since it is believed to be one of the most populated places with customers who are doing their day to day transactions there. Furthermore, NMB accommodates almost bigger number of public employees who receives their salary via that Bank.

3.3.2 Area of the Study

The study was carried out in Dar es Salaam city specifically in Ubungo District at Mlimani City center simply because the area was easily reached with lots and lots of

day to day activities. It is the place where one of the NMB Branch is located there. NMB accommodates almost bigger number of public employees who receives their salary via that Bank.

3.4 Sampling Design and Procedures

3.4.1 Sampling Design

Convenient sampling procedure was employed to access the bank customers. Convenience sampling involves drawing samples that were both easily accessible and willing to participate in a study. The advantageous of this method was easy access, required little effort on the part of the researcher (Adedayo, 2013). On the other hand, it was not an accurate representation for population; it skewed the results quite radically (Kawamala, 2013).

3.4.2 Sample Size

In sampling, there are two major goals that sampling can achieve (Baker, 1999). The first one established representatives of what was being studied and conversely to reduced bias. The second was to be able to make interpretations from findings based on a sample to a larger population from which that sample was drawn. Slovin's formula was used to compute the sample size for the study.

A sample size of 200 NMB customers was selected through convenience sampling technique. Then this sample size was drawn from NMB customers who usually visited and used the NMB bank at Mlimani City branch to do their transactions electronically both male and female aged 18 and above. Since the researcher knew only the

population size and did not have any other parameters of the population, Slovin's formula was used to calculate the sample size, written as; $n = N / (1 + Ne^2)$

Where n = Number of samples or sample size,

N = Total population and

e = Error tolerance.

Table 3.1: Sample Size of the Respondents

Respondent Type	Total Respondent	Actual respondent %
NMB Customers	200	100
Total	200	100

Source: Author 2017

3.5 Variables and Measurement Procedures

Self-administered questionnaire that includes both open ended and closed ended questions was employed. A 4 Likert scale point covering 7 items such as fast transfer, security, availability, user friendly, time accessibility and time that measuring e-banking was borrowed from a study of Kawamala (2013). 7 statements presented in a 4 Likert scale point measuring items such as ease of navigation, personalization, willingness to use, accessible, assurance and trust adopted from a study by Simon and Thomas (2016) was used to measure customer satisfaction.

3.6 Data Collections Methods

3.6.1 Questionnaire

The questionnaires had three sections; the first part covered respondents demographic information's be used in order to get the real picture of the mind of the respondents. Saunders, et al., (2007) recommends this method because it accommodates a large

sample and its findings were dependable and reliable. Questionnaires were also cheaper to administer than other means and gave respondents adequate time to think through the questions/answers. This method was more practicable for the study because the finding was generalized for use by different researchers. The questionnaire contained both closed and open-ended questions that were administered by the researcher. Questionnaires are easy to administer, relatively quickly to collect information and less coast method Kawamala (2013). Additionally, questionnaire can measure both quantitative and qualitative data but also it is a good tool for the protection of the privacy of the participants.

3.6.2 Documentary Review

Documentary review refers to the reviewing of most recently published and unpublished documents including research reports, journals and institutional training policy.

3.7 Data Analysis Methods

3.7.1 Descriptive Statistics

Generally, data was analyzed using the Statistical Package for Social Science (SPSS) software. Descriptive data analysis was employed in the analysis of the demographic or biodata information. The statistics computed include frequency distribution and percentages. For this study, descriptive data analytical approaches were employed to analyze the variables related to benefits of e-banking services. The analyzed statistics included frequency distribution and percentages for each of the variable of interest. Additionally, the same method was also used to analyzethe variables related to

challenges of e-banking services. This is not the first study to use descriptive analysis to analyze data other researchers who employed the same methods including a work by Ishengoma (2011), Ahmad and Al-Zu'bi (2011), Ankit (2011), Ali and Akter (2010), Amaoko (2012), Nupur (2010) and Sonja (2010) just to mention a few.

3.7.2 Binary Logistic Regression Analysis

To test the effects of electronic banking on customer satisfaction in Tanzania banking industry, a binary logistic regression model will be estimated. The advantages of this analytical approach is that it can estimate variation on likelihood of an event of interest (in this case satisfaction with banking services) to occur in relation of predictor variables of the survey subject. It also yields Odds Ratios showing the magnitude of likelihood of the event of interest to occur. It uses a dependent variable which is having only two outcomes (binary outcomes). Since my dependent variable has only two outcomes (whether a customer is satisfied with banking services or otherwise) the use of binary logistic regression was appropriate. Assumptions used in this model are the same as those of the linear regression model. It is a reliable tool used by many researchers including Kolasinski and Kothari (2008), Ellingsen, Johannesson, Lilja and Zetterqvist (2009), Ishengoma (2011), Nupur (2010), Lampe (2011), Mayew and Venkatachalam (2012), and Avnet, Pham and Stephen (2012).

According to Tabachnick and Fidell (2012) the major assumptions of binary logistic regression are:

- (i) Logistic regression does not require a linear relationship between the dependent and independent variables. However it assumes linearity of independent

variables and log odds (the independent variables are linearly related to the log odds).

- (ii) The error terms (residuals) do not need to be normally distributed.
- (iii) The dependent variable in logistic regression is not measured on an interval or ratio scale, it must be measured in ordinal scale.
- (iv) The observations to be independent of each other. In other words, the observations should not come from repeated measurements or matched data.
- (v) Logistic regression requires there to be little or no multicollinearity among the independent variables. This means that the independent variables should not be too highly correlated with each other.

The specification of the model to be examined was as shown below:

$$\text{Logit}(y) = \left(\ln \frac{p}{1-p}\right) = \delta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_n x_n + \mu \dots \dots \dots (1)$$

Where:

- Y Dependent variable/ outcome of interest (1 = if customer is satisfied with e-banking; OR 0 if otherwise)
- δ Constant parameter (y intercept)
- β_s Regression coefficients of predictor/independent variables
- x_s Independent / predictor variables
- x_1 Fast transfer time
- x_2 Security of e-banking service

x_3	Availability of e-banking service
x_4	Easy to use e-banking service
x_5	Awareness about e-banking service
x_6	Accessibility of e-banking service
x_7	Time factor for accessing of e-banking service
μ	Stochastic disturbance (error term)

The data collected were presented in tables of frequency distributions and simple percentage. Two hundred 200 copies of questionnaire were administered, out of which 176 were completed and returned.

3.8 Chapter Summary

This chapter discussed the research design for this study. It further highlighted the sampling design, sample size and data collection methods. Additionally, this chapter clarified the data analysis methods that will be used in study.

CHAPTER FOUR

RESULTS AND INTERPRETATION OF THE FINDINGS

4.1 Introduction

This chapter presents a detailed discussion of the study and interpretation of the findings in line with the specific objectives which is to analyze the impacts of electronic banking on customers' satisfaction in Tanzania banking industry. The presents the description of the respondents' profile. It also presents the factors contributing to the satisfaction of the customers towards the usage of electronic banking services in Tanzania, the effects of e-banking functionality on the satisfaction outcomes, benefits and challenges of using e-banking services to bank customers in Tanzania.

4.2 Socio Demographic Characteristics of the Respondents

4.2.1 Sex

Respondents were asked to indicate their gender. Researcher was interested in collecting information on gender issue in order to know gender balance. Results were presented in Table 4.1. Out of 200 distributed questionnaires, a total of 176 were returned which is equivalent to 88% of the total response rate. The strategy used to collect the data was questionnaire which was filled by the customers using e-banking services. The researcher interviewed these respondents physically and the questionnaires were immediately filled by either the researcher or the respondent. The results were 47.2% female and 52.8% male as shown in Table 4.1 below. The findings discovered that, male customers are more likely to use e-banking services than female customers.

4.2.2 Education Level

Respondents were asked to state their highest level of education they had attained by selecting from a given list comprising various level of education as per the Tanzanian education system. A researcher was interested to know the bank individual customers' education level. The results were as presented in Table 4.1.

Results revealed that respondents had different level of education of which 1.1% had primary level, 2.3% had secondary level, 3.4% had certificate level, 12.5% had diploma level, 70.5% degree level and 10.5% masters' level. The highest level was observed to be those with degree level followed by those with diploma level and the lowest were those with primary level followed by those with secondary level.

The findings discovered that, customers differ in education level as supported by the study done by Chi, Yeh and Jang (2008) on the effects of services quality and customer satisfaction on behavioral intentions. Findings of their study revealed that user of e-banking in Tanzania have different level of education and the more educated are likely to use e-banking services. This is simply because they understand the concept and knowledge of using the services and that they keep their money in banks and when they need it, e-banking is convenient means of getting the cash on time.

4.2.3 Marital Status

Marital status of the respondents was also an important factor, out of 176 collected questionnaires, the results were as follows; (63.1 %) single, (34.1 %) married and (2.8%) widow and the results were presented in Table 4.1. The findings show that, the highest percent of e-banking users are single, followed by married people. As revealed

in the education level results, most users were students and most of them are still single falling in the age limit of 18 - 30 years.

4.2.4 Age

Age of respondents in using e-banking services is an important factor in this study. Therefore, respondents were required to state their ages from the given options of; 18 – 25 years, 26 – 30 years, 31– 40 years and above 40 years. The results were presented in Table 4.1. The results indicated that age of respondents differs. It was revealed that out of 176 respondents, (41.5%) were between 18 – 25 of age, (28.41%) were between 26 – 30 of age, (21.6%) were between 31 – 40 of age and (8.5%) were above 40 of age. These findings show that the lowest ages were observed to be that of 40 years and above. However, the highest age were observed to be those with 18-25. Furthermore, these findings show that the highest ages were between 18 to 30 years that are the ages of most university students. These findings were supported by the study done by Kawamala, (2013). Findings of their study confirm the findings of this study that students a major user of banks.

Table 4.1: Socio Demographic Characteristics Of The Respondents (N=176)

Variable	Frequency	Percent
Sex		
Female	83	47.2
Male	93	52.8
Total	176	100.0
Education		
Primary	2	1.1
Secondary	4	2.3
Certificate	6	3.4
Diploma	22	12.5
Bachelor degree	124	70.5
Masters degree	18	10.2

Variable	Frequency	Percent
Sex		
Female	83	47.2
Male	93	52.8
Total	176	100.0
Marital status		
Single	111	63.1
Married	60	34.1
Widow	5	2.8
Total	176	100.0
Age		
18-25 years	73	41.5
26-30 years	50	28.41
31-40 years	38	21.6
Above 40 years	15	8.5
Total	176	100.0

Source: Field Data

4.2.5 Customer's Monthly Income

Respondents were asked to state their monthly income and results were as shown in Table 4.2. It revealed that (19.9 %) have the monthly income of < 150,000, (33.5 %), have the monthly income of 150,000 – 450,000, (33.0 %) have the monthly income of 450,000 – 1,000,000 and (13.6 %) have the monthly income of >1,000,000. The findings show that, the average monthly income for most Tanzanians is between 150,000 to 1,000,000.

Table 4.2: Monthly Income of the Respondents (N=176)

	Frequency	Percent
<150,000	35	19.9
150,000-450,000	59	33.5
450,000-1,000,000	58	33.0
>1,000,000	24	13.6
Total	176	100.0

Source: Field Data

4.2.6 Years of using E-banking Services

Table 4.3 below shows how long the respondents have been using the e-banking services in frequencies and percentages. The results were as shown; (4.0 %) have been using the e-banking less than a year, (52.3 %) have been using e-banking services for 1-4 years, (29.0 %) have been using e-banking services for 4-8 years and (14.8 %) have been using e-banking services for more than 8years. The findings show that, the range of 1-4 years have a high percentage of e-banking users as compared to other years, this is due to the fact that, few years ago is when the adoption and growth of the e-banking technologies in Tanzania has improved as supported by the study of E-Banking and customer's perceptions in Tanzanian commercial Banks by Kinusi, (2013).

Table 4.3: Years of Using E-Banking Services (N=176)

Variables	Frequency	Percent
1<year	7	4.0
1-4 years	92	52.3
4-8 years	51	29.0
> 8years	26	14.8
Total	176	100.0

Source: Field Data

4.3 Examining Relationship between E-Banking Services on Customer

Satisfaction

This sub-section shows the relationship between e-banking services and customer satisfaction. The variables considered by the researcher were reliability, transfer time, security, availability, easy to use, awareness, accessibility, time factors and the level of satisfaction of customers using e-banking services.

4.3.1 Descriptive Results of Likert Scale Data

The outcomes were presented in Table 4.4 as follows; 70.3% of the respondents agreed that they were satisfied with the e-banking services, 10.3% were strongly satisfied while only 18.3% of the respondents disagreed and 1.1% strongly disagreed on the to be satisfied with the e-banking offered by the banks. Regarding the availability of the information on e-banking services to customers, the response was as follows, 71.9% agreed to have enough information while the 28.1% had no information on the services.

Furthermore, the customers expressed their sincere feeling whether the bank meets their needs and expectations when using the e-banking services and were their responses, 55.5% agreed and 6.4% strongly agreed to that their needs and expectations were met, while 35.3% and 2.9% disagreed and strongly disagreed respectively that their expectations and needs were never met.

The response on user friendliness of the e-banking services was very high as 81.1% agreed and 8.0% strongly agreed that the services offered by the banks were easy to us while 10.9% disagreed on the user friendliness of the e-banking services offered. This can be due to availability and accessibility of the services as well as the availability of the information to many bank customers Kawamala (2013) and Ishengoma (2011).

on the accessibility item, 48.5% and 5.9% agreed and strongly agreed respectively while 43.8% and 1.8% disagreed and strongly disagreed respectively that they could hardly access the e-banking services. When customers were asked their opinions on

the e-banking services security, these were their responses; 58.4% and 7.5% had no doubt on the security while 32.9% and 1.2% had no trust on the security due to online theft and other security issues. Regarding the costs charged by the banks on these e-banking services, the customer responses were as follows; 50.6% and 9.9% agreed that the services offered were cost effective while 36.6% and 2.9% disagreed and strongly disagreed saying that the costs of accessing the services were too high for them.

Lastly, many of these customers were willing to continue using the e-banking services and products as they were satisfied by the produces or banks services. These were they responses; 76.2% and 17.4% agreed and strongly agreed to continue using the services while only 4.7% and 1.7% were willing to quit from using the services. Conclusively, there was a strong relationship between the e-banking services / products offered by the banks and the customer satisfaction level Kawamala (2013), Simon (2016) and Firdous (2017).

Table 4.4: Customer Satisfaction Level in using e-Banking Services (N=176)

Variable	Strongly disagree	Disagree	Agree	Strongly agree
	% (n)	% (n)	% (n)	% (n)
Are you satisfied with the services offered by the bank?	1.1 (2)	18.3 (32)	70.3 (123)	10.3 (18)
Are you satisfied with the information about e-banking and are they available?	2.3 (4)	25.9 (45)	62.1 (108)	9.8 (17)
Does the bank ensure that customer needs and expectations are met?	2.9 (5)	35.3 (61)	55.5 (96)	6.4 (11)
Are the services easy to use?	0.0	10.9 (19)	81.1 (142)	8.0 (14)
Are you able to access any service any time?	1.8 (3)	43.8 (74)	48.5 (82)	5.9 (10)
Are you satisfied with the security of the bank?	1.2 (2)	32.9 (57)	58.4 (101)	7.5 (13)
Due to services offered; are you willing to continue using the e-banking services?	1.7(3)	4.7 (8)	76.2 (131)	17.4 (30)
Are services offered cost effective?	2.9 (5)	36.6 (63)	50.6 (87)	9.9 (17)

Source: Field Data

4.3.2 Results of Inferential Statistics using Binary Logistic Regression

The results of a Binary Logistic Regression Model to examine the strong predictors of customer satisfaction with e-banking are presented in Table 4.5. The original model fitted had 12 predictor (independent) variables. However, after fitting the model, only six variables were found to fit best. The remaining variables in the final model were gender, income level, years of using bank services; availability of e-banking facilities, how easy to use is the e-banking facility, accessibility of e-banking facility and time factor.

Among these variables, only one namely accessibility of e-banking facility appeared to be a strong predictor of customer satisfaction with the service ($p < 0.05$). All other predictor variables namely gender, income level, years of using bank services, availability of e-banking facilities, how easy to use is the e-banking facility, and time factor yielded insignificant results as 95% level of confidence ($p > 0.1$). The interpretation is that these predictors can probably give significant results if they are fitted to the model with other factors or variables, which were not included in my study.

As for the variable which yielded significant results it appears that those customers who reported that they consider accessibility of e-banking facility to be unimportant factor were less likely to be satisfied with the service as compared with their counterparts who reported that accessibility is most important. This fact is ascertained by the negative sign of regression coefficient (β), for the variable unimportant. Since the results were statistically significant at 95% level of confidence ($p < 0.05$), it's imperative to say that the Odd Ratio (e^{β}) indicates that the customers who consider

accessibility of e-banking facility to be unimportant factor were 0.2 times less likely to be satisfied with the service as compared to their counterparts who consider accessibility to be very important. Basing on 95% Confidence Interval it appears that if the entire population of NMB commercial bank customers was to participate in the study, the population Odd Ratio for those who consider accessibility to be less important could range from 0.04 to 0.86 lower than their counterparts who consider accessibility to be very important (Table 4.5).

Table 4.5: Predictors of Customers' Satisfaction with E-Banking Services (N=176)

	B	S.E.β	Wald Chi square	df	p	Odd Ratio (e ^β)	95.0% C.I. for e ^β	
							Lower	Upper
Female	-0.726	0.60	1.46	1	0.226	0.48	0.14	1.567
Income			2.82	3	0.420			
<150,000	-0.95	1.26	0.57	1	0.448	0.38	0.03	4.55
150,000-450,000	-1.08	1.16	0.86	1	0.353	0.33	0.03	3.32
450,000-1,000,000	0.22	1.20	0.03	1	0.851	1.25	0.11	13.19
Years of use			1.903	3	0.593			
<1 year	-0.87	1.84	0.22	1	0.636	0.41	0.01	15.47
1-4 years	-0.93	1.18	0.62	1	0.431	0.39	0.03	3.99
4-8 years	0.07	1.23	0.00	1	0.951	1.07	0.09	12.17
Availability			1.04	3	0.790			
The least important	18.08	4.02 ^{E4}	0.00	1	1.000	7.15 ^{E7}	0.00	.
Unimportant	21.05	1.62 ^{E4}	0.00	1	0.999	1.10 ^{E9}	0.00	.
Important	0.76	0.75	1.04	1	0.307	2.15	0.49	9.38
Easy to use			1.75	3	0.624			
The least important	3.83	5.68 ^{E4}	0.00	1	1.000	46.36	0.00	.
Unimportant	17.34	2.23 ^{E4}	0.00	1	0.999	3.42 ^{E7}	0.00	.
Important	-0.97	0.73	1.75	1	0.185	0.37	0.09	1.59
Accessibility			4.657	2	0.097			
The least important	17.90	1.64 ^{E4}	0.00	1	0.999	5.96 ^{E7}	0.00	.
Unimportant	-1.60	0.74	4.65	1	0.031 ^{**}	0.20	0.04	0.86
Time factor			1.12	2	0.570			
Not important	16.49	1.91 ^{E4}	0.00	1	0.999	1.45 ^{E7}	0.00	.
Important	0.77	0.72	1.12	1	0.289	2.16	0.52	9.00
Constant	3.61	1.10	10.78	1	0.001	37.28		

Note: Reference category: **Gender** = Male; **Income** = > 1 Million; **Accessibility** = most important; **Time factor** = Most important; **Availability** = most important,
****** = Statistically significant at 95% level of confidence

Results in Table 4.6 show overall evaluation of the model. The primary statistic used in this evaluation is the Goodness of the fit test basing on Hosmer and Lemeshow Chi-square statistic. Goodness-of-fit statistics help to determine whether the model adequately describes the data. The Hosmer-Lemeshow statistic indicates a poor fit if the significance value is less than 0.05. The results yielded a Chi-square value of 4.794, with 8 degrees of freedom and p value of 0.779. According to the rule of the thumb, the cut off value of p value greater than 0.05 signifies that the model is tenable meaning that the results are good enough to report. In Table 4 two supplementary tests statistics namely R-squares developed by Cox and Snell; and Nagelkerke are also presented, although their robustness is not as strong as in the linear regression model (Hosmer and Lemeshow, 2000).

Table 4.6: Overall Model Evaluation Using Goodness of the Fit Test

Statistic	Chi-square		P
Hosmer and Lemeshow Test	4.794	df 8	0.779
Cox & Snell R Square = 0.215			
Nagelkerke R Square = 0.339			

4.4 Benefits of using e-banking services

Under this objective, study sought to investigate the benefits customers get when using e-banking services in Tanzania banking industry. The given benefits were fast transfer time, security issues, availability of the services / products, user friendly, awarenesss, accessibility and time factor. Respondents were asked to rank these advantages based on their importance. Results were presented in Table 4.6 as follows; customers were pleased with the transaction speed by the rate of 36.6% and 58.9%

important and most important respectively, while 2.3% least important and 2.4% unimportant said the e-banking services speed were less important to them.

Regarding the service security, 35.8% important and 60.8% most important of the respondents were kin about the security of their money while the 2.3% least important and 1.1% were never concerned about it. 41.7% and 50.3% were pleased with the availability of the e-banking services and this was an important factor for them to prefer e-banking than the ordinary bank services. Only 1.7% and 6.3% were not pleased with the availability by rating least important and unimportant respectively.

User friendliness was another important factor, 55.0% and 40.4% said the service was easy to use, and only few said it wasn't user friendly, Amaoko (2012). 57.7% and 34.9% of the respondents said the awareness given to them by bank sectors on e-banking services and products was good enough to keep them and only 1.7% and 5.7% said the awareness wasn't an important factor to them. on the Accessibility item, customers can access the services at any time and any where, 44.9 and 50.0% of the respondents said this is one of the many benefits of using e-banking, Njogu (2014).

Another finest benefit of e-banking possibly is based on the truth that customers need no more to use the ordinary banking system as it consumes more of their time, 32.4% and 63.6% of the respondents said it was an important and most important beneficial factor with e-banking, there is no need of queuing for the daily bank services. Another essential benefit of e-banking is that it saves time and it can be easily accessed by the bank customers in different areas of the towns even in the rural areas Kawamala, (2016) and Simon, (2017).

Similarly, some of the researchers in India found the following advantages from their respondents; there are no barrier limitations; it is convenient; it has transformed traditional practices in banking; the only way to stay connected to the customers at any place and any time is through internet applications; it results in high performance in the banking industry through faster delivery of information from the customer and service provider; it saves time, and it encourages queue management which is one of the important dimensions of e-banking service quality (Gonzalez et al, (2008); Singhal and Padhmanbhan, (2008) and Brodie et al, (2007).

Table 4.7: Percentage Distribution of Respondents Based on the e-Banking Services Most Importance (N=176)

Variable	The least important	Unimportant	Important	The most important
	% (n)	% (n)	% (n)	% (n)
Fast transfer time	2.3 (4)	2.4 (4)	36.6 (64)	58.9 (103)
Security	2.3 (4)	1.1 (2)	35.8 (63)	60.8 (107)
Availability	1.7 (3)	6.3(11)	41.7 (73)	50.3 (88)
Easy to use	1.2 (2)	3.5 (6)	55.0 (94)	40.4 (69)
Awareness	1.7 (3)	5.7 (10)	57.7 (101)	34.9 (61)
Accessibility	0.0 (0)	5.1 (9)	44.9 (79)	50.0 (88)
Time factor	1.1 (2)	2.8 (5)	32.4 (57)	63.6 (112)

Source: Field Data

Based on the importance of the e-banking service type, the results of the respondents were presented as shown in the Table 4.8; mobile banking (74.1%) was found to be the most important services to be used by many customers, followed by ATM (64.9%), branch banking (64.7%), telephone banking (30.6%) and internet banking (23.1%) consecutively.

The study also concluded that, convenience of mobile banking affects customer satisfaction to a great extent. On the effect of ATMs on customer satisfaction among commercial banks, it concluded that user friendly and ease of access of ATMs affects customer satisfaction to a great extent, Simon (2017).

Table 4.8: Percentage Distribution of Respondents by Rating E-Banking Services Types Based on their Importance (N=176)

Variable	The least important	unimportant	important	The most important
	% (n)	% (n)	% (n)	% (n)
ATM	6 (1)	2.9 (5)	32.6 (55)	64.9 (113)
Internet banking	4.6 (8)	23.7 (41)	48.6 (84)	23.1 (40)
Telephone banking	5.8 (10)	12.7 (22)	50.6 (88)	30.6 (53)
Mobile banking	0.1 (2)	1.7 (3)	24.1(42)	74.1 (129)
Branch banking	1.2 (2)	1.7 (3)	32.4 (56)	64.7 (112)

Source: Field Data

4.5 Challenges of using E-Banking Services

Under objective three, study sought to investigate the challenges faced by customers when using e-banking services in Tanzania. Respondents were required to provide their opinions on the challenges they face when using e-banking services and their results were as follows;

Network Problem: Network failure especially in night time, breakdown of ATM machines and server breakdown are the main challenges seen by bank customers. This is caused by poor network infrastructure of many banks. Security challenges: electronic banking is challenged by cybercrimes, as one can maneuver the whole

aspect form a distance and become unrecognized acts of theft in which one creates an email in the name of the financial Institution and deliver it to customer, would cause a serious challenge by giving out information which are used to draw money from a person's account. Implementation of security and data protection mechanisms was a major challenge found in Greece banks, Angdlakopoulos and Mihiotis (2011).

Accessibility challenges: Limited to educated people, limited to people with electronic devices. limited to urban areas, multiple holding of cards in urban and semi-urban areas show low rural penetration. According to Angdlakopoulos and Mihiotis (2011) the relatively low Internet usage, the non-familiarity with technologically advanced devices were seen as major problems in Greece.

Fewer machines: causing queue, poor accessibility and inconvenient Limited availability of Point of Sale terminals and poor transaction culture in POS, Ramakrishna. (2006). According to Reserve Bank of India, there are 1.44 million POS terminals installed by various banks across locations at the end of July 2016. But most of them remain in urban/ semi-urban areas.

Mobile internet penetration remains weak in rural areas: For settling transactions digitally, internet connection is needed. Interiorly, there is poor connectivity in rural areas. In addition to this, a lower literacy level in poor and rural parts of the country, make it problematic to push the use of e-banking on a wider scale, Annamalai and Muthu, (2008). Higher service charges: higher transaction charges, Most card and cash users fear that they will be charged more if they use cards. Further, non-users of credit cards are not aware of the benefits of credit cards as reported by Shankar, (2017).

Technical challenges: Poor personnel, takes time to be helped when an error occurs, cards problem especially MNB master cards. **Information challenges:** there is a delay in information causing incomplete transaction. A study in Ethiopia by Worku, (2010) found that e-banking was not well known to bank customers and many banks were too late to move with technological advancement. Another major threat faced by the banking industry was their non-technical staff and improper training sessions. Mostly the bank sector preferred to appoint those people who belong to banking education or commerce and business education for execution of banking activities, Hussain, et al (2017).

Amount challenges: E-banking services is not helpful in some cases as it is limited to a certain withdraw amount per day hence customers fail to meet their needs. Also lack of enough cash during weekends in some machines.

Table 4.9: Challenges Associated with E-Banking Services (N=176)

Challenge	Frequency	Percent	N
Network problem challenge	71	56.3	126
Security challenge	36	28.8	125
Accessibility challenge	19	15.1	126
Power breakdown challenge	7	5.6	125
Service charges challenge	8	6.4	125
Technical challenge	27	21.4	126
Information challenge	10	7.9	126
Limited withdraw amount	10	8.0	125
Out of service challenge	25	19.1	131

Source: Field data (2017)

4.6 Chapter Summary

This chapter discussed the research results. It further interprets the findings of each research questions and objectives as shown in the tables above.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to investigate the effect of e-banking on customers' satisfactions in Tanzania banking industry. The case study was National Microfinance Bank (NMB), Mlimani city Branch-Dar es Salaam. The specific objectives were to; to investigate the effects of e-banking services on customer satisfaction, to find out the benefits associated with electronic banking usage and to find out the challenges associated with electronic banking usage. It is organized into five major sections. Section 5.1 provides introduction to the chapter, section 5.2 highlights the summary of study findings including the objectives and section 5.3 provides the overall conclusion to the study. Section 5.4 highlights the recommendations and last section 5.5 points out suggestions of areas for further studies.

5.2 Summary

The findings of this study had 176 respondents of which (52.8%) were males and (47.2%) were females. It was observed that the highest levels were observed to be those with bachelor degree which carried 70.5% of the respondents followed by those with diploma in any training. The lowest number was those with primary education which took 1.1% of the respondents followed by those with secondary education that took 2.3% of the total respondents. These findings show that Customers differ in education level from those with high level of education to lower ones. However, the highest age were observed to be of those with 18-25years which covered 41.1 of the respondents followed by those aged 26-30years which covered 28.41% of the

respondents and the lowest being the customers above 40years. Furthermore, these findings showed that the highest ages were between 18 to 35 years that are the ages of most students.

The highest numbers of Respondents were observed to be those with experience between 1-4 years of experience that covered 52.3% followed by those between 4-8 years that covered 29.0%. However, the lowest numbers of respondents were observed to be those below 1year of experience. These findings show that Customers have enough experiences with e-banking services and products.

It was also revealed that a large number of banking customers using e-banking services and products were satisfied with the e-banking services and products offered. However, it was discovered that accessibility of the e-banking services and products was another factor associated with the comfortability of using the services. The study indicated that a large number of respondents were very pleased with the e-banking services and products. The user friendliness, time factor and security of most the e-banking services have increased the customer satisfaction level and trust of using the e-banking services in the Tanzania banking industries. However, challenges like network failure, poor customer care, higher transaction charges and online help in case of transaction failure, limited amount when withdrawing was found to be an obstacle to customers hence stake holders needs to observe and resolve these challenges so as to keep their royal customers.

The findings of this study also revealed that the accessibility of e-banking to bank customers in Tanzania. It was discovered that an accessible product or service is one

which can be used by all its intended users, taking into account their differing capabilities. A user's ability to make inputs and perceive outputs may be impaired. It was further revealed that a service delivered through e-banking will be accessible to the widest possible audience if the following conditions are met: all users are able to perceive and understand the controls. The findings further revealed that increased accessibility brings benefits for users, service providers and society at large.

It was also noted that location of the services speed of Service, availability, price and environment made the services to be convenient for Customers. It was noted that with an increasing number of consumers utilizing the global marketplace of the e-banking, availability and convenience are some of the primary factors for spending digitally. It was further revealed that the finest benefit of e-banking possibly is based on the truth that customers are no more needed to hold back in individuals lengthy and wearisome queues from the banks to request an economic transaction or statement. Another essential benefit of e-banking is that it makes the opening of the account quite easy and simple and with little documents. Customer may also make an application for bank financial loans without personally going to any nearby branch of the bank.

5.3 Conclusion

The study concludes that there was a strong positive relationship between e-banking services and customer satisfaction. Customers support greatly the use of e-banking services such as mobile money, ATM and Sim banking. They derive certain benefits from the use of these services mostly saves time, easy to access and convenient. However, customers prefer ATM among the E-banking services because of its efficiency, user friendliness and time saving. Furthermore, e-banking services is more

secured hence minimal transaction risks. Despite the benefits of E-banking, it is associated with some challenges. The study shows that network failure from internet connection, higher transaction charges and limited withdraw amount are the major challenges facing customers using E-banking services and products.

5.4 Recommendation

From the finding there is need for various stake holders in the banking sectors to improve the technological infrastructure on the banking industries by putting more efforts on the e-banking services and products as this will enable them reach a large number of customers, flexibility, interactivity and greater accessibility compared to conventional banking. There is need for commercial banks to heavily invest in technology as this will highly encourage the use of electronic banking technologies and this will influence the financial performance of commercial banks. There is also need for Tanzania commercial banks to increase their size as it positively influences their financial performance.

5.5 Limitation of the Study and Suggested Areas for Further Studies

5.5.1 Limitations

While undertaking this research, there were some limitations and challenges encountered, this included financial challenge. Because of financial limitations and time limits the focus of this study was on addressing the effects of e-banking on customer satisfaction in NMB Branch in Dar es salaam. Other study could be done examining the same variables comparing the effects among multiple commercial banks in Tanzania.

Despite the fact that there are abundant studies that have been done addressing customer satisfaction and e-banking but the focus of those studies were on the effects of online banking and profitability of the banks Njogu (2014), the effects of ICT on e-banking Amaoko, (2012) and Ishengoma, (2011) analysed the effects of mobile banking for financial inclusion in Tanzania.

Another problem was the lack of cooperation from the bank customers as many respondents have a little knowledge about the e-banking services offered by the Tanzania banking industries. Last but not least, the study considered only urban areas of the city neglecting the bank customers from rural areas.

5.5.2 Suggested Areas for Further Studies

The study sought to determine the effects of electronic banking on customer satisfactions of NMB bank. Because of financial limitations and time limits the focus of this study was on addressing the effects of e-banking on customer satisfaction in NMB Branch in Dar es salaam. Other study could be done examining the same variables comparing the effects among multiple commercial banks in Tanzania.

This limited the generalization of the study findings, therefore other researchers should focus on addressing the relationship between customer satisfaction and e-banking in the remaining banks and tries to understand their satisfaction level on the basis of proxy determinants as level of satisfaction is a cardinal approach because the generated findings could highlights different picture regarding the subject matter. Moreover, currently transition period is going on due to the change of the system from

the manual to the electronic banking system. At least every year if the level of satisfaction is measured then it will be better to identify whether any structural breakthrough happened among customers of the banks in case of using the electronic banking in the country.

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APPENDIX

Appendix I: Research Questionnaire

Introduction

My name is Doreen Akad, I am conducting a study titled “The Effects of Electronic Banking on Customer’ Satisfactions in Tanzania Banking Industry”. The aim of this study is to analyze the effects of electronic banking on customers’ satisfaction in Tanzania banking industry. I am kindly asking you to take part in this study, because the success of this study depends on your cooperation. The findings of this study will be treated anonymously and will be used solely for academic purpose only. This survey covers three main parts. The first part covers respondents’ demographic information. The second part covers information related to e-banking services and the final part includes customer satisfaction information. You are required to put a tick (✓) against the statement you think it is the most important to you.

Section A: Personal information

1. Gender

- i). Female []
- ii). Male []

2. Education Level

- i) Primary []
- ii) Secondary []
- iii) Certificates []
- iv) Diploma []
- v) Bachelor degree []

vi) Masters degree []

vii) Phd and above []

3. Marital status

i) Single []

ii) Married []

iii) Widow []

iv) Divorced []

4. Age category

i) 18-25years []

ii) 26-30years []

iii) 31-40 years []

iv) Above 40 years []

5. What is your monthly income?

i). <150,000

ii). 150,000-450,000

iii). 450,000-1,000,000

iv). >1,000,000

SECTION B: E-BANKING SERVICES

6. How long have you been a customer of the bank?

i). < 1year

ii). 1-4 years

iii). 4-8years

iv). >8years

7. In your opinion do you think there is any connection between e-banking and customer satisfaction?

i). Yes []

ii). No ☐

Please rate the following statements related to advantages of e-banking services. Rank the extent to which you agree with the following advantages of e-banking based on the level of importance to you on a 4 point Likert scale 1 (The least important), 2 (unimportant), 3 (important), 4 (the most important). Please tick (✓) once to the most appropriate answer.

S/N	E-banking variables	1	2	3	4
1	Fast transfer time				
2	Security				
3	Availability				
4	Easy to use				
5	Responsiveness (Awareness)				
6	Accessibility				

8. On the following statements, please rank the extent to which you agree with the following advantages various types of e-banking services based on the level of importance to you on a 4 point Likert scale 1 (The least important), 2 (unimportant), 3 (important), 4 (the most important). Please tick (✓) once to the most appropriate answer.

S/N	E-banking Product	The Least important	Unimportant	Important	The most important
1	ATM				
2	Internet banking				
3	Telephone banking				
4	Mobile banking				
5	Branch banking				

SECTION C: ADVANTAGES OF E-BANKING SERVICES

9. Based on your opinion what do you think are the advantages of e-banking?

.....

SECTION D: CHALLENGES OF E-BANKING

10. Are there any challenges associated with the use of e-banking services?

i). Yes []

ii). No []

If yes, mention them based on your opinion.....

.....

SECTION E: CUSTOMER SATISFACTION

11. Please indicate the level to which you agree or disagree with the following statements regarding to customer satisfaction on a 4 Likert scale 1 (Strongly disagree) to 4 (strongly agree). Tick (✓) to the appropriate box once.

S/N	Statement	Strongly disagree	Disagree	Agree	Strongly agree
1	Are you satisfied with the services offered by the bank?				
2	Are you satisfied with the information about e-banking and are they available?				
3	Does the bank ensure that customer needs and expectations are met?				
4	Are the services easy to use				
5	Are you able to access any service any time?				
6	Are you satisfied with the security of the bank?				
7	Due to the services offered, are you willing to continue using the e-banking services?				